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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,808	07/22/2003	David Alan Bailey	ROC920030220US1	6643
46296	7590	12/04/2006	EXAMINER	
MARTIN & ASSOCIATES, LLC P.O. BOX 548 CARTHAGE, MO 64836-0548			DOAN, DUC T	
			ART UNIT	PAPER NUMBER
			2188	

DATE MAILED: 12/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/624,808

Applicant(s)

BAILEY ET AL.

Examiner

Duc T. Doan

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11, 14-16 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14-16 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Status of Claims***

Claims 1-21 have been presented for examination in this application. In response to the last office action, the specification has been amended, claims 1, have been amended, claims 12-13,17-18,20-21 have been canceled. As the result, claims 1-11,14-16,19 are pending in this application.

Claims 1-11,14-16,19 are rejected.

All rejections and objections not explicitly repeated below are withdrawn.

Applicant's remarks filed 10/11/06 have been fully considered but they are mooted in view of new ground(s) of rejection necessitated by the Applicant's amendments to the claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11,14-16,19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day et al (US Pub 2003/0084030) in view of Tarui et al (US Pub 2002/0112102).

As in claim 1, Day discloses an apparatus comprising: at least one processor (Day's Fig 1: #101A-H CPU); a memory coupled to the at least one processor (Day's Fig 1: #102 memory); a plurality of logical partitions defined on the apparatus (Day's Fig 2: #206B, #205B, #204B a hypervisor partition represented by user application code modules, operating system code modules such as high level OS and OS kernel); a partition manager residing in the memory and executed by the at least one processor (Day's Fig 2: #203, #202 hypervisor management code and based hyper visor code PLIC executed by processor in memory, corresponding to the claim's partition manager), the partition manager managing the plurality of logical partitions and executing separately from the plurality of logical partitions (Day's paragraph 28,37 discloses the partition management code (Fig 2: #203, #202 hypervisor management code and based hyper visor code PLIC) executes separately from logical partition to manage resources in plurality of logical partitions), Day does not expressly disclose the claim's detail of I/O reconfiguration mechanism. However, Tarui discloses the partition manager (Tarui's paragraph 59 lines 1-2, partition control program such as hypervisor) comprising an I/O reconfiguration mechanism that reconfigures identified I/O (Tarui's paragraph 53 reconfiguring I/O resources that being shared among logical partitions); and a logical partition suspend/resume mechanism that suspends at least one of the plurality of logical partitions before the I/O reconfiguration mechanism reconfigures the identified I/O by inhibiting dispatch of tasks to the at least one logic partition (Tarui's paragraph 84 discloses the partition control program instructs the OS of the current partitions (i.e the partitions whose allocations of resources are being changed, paragraph 83) to stop using the resources, thus obviously no more i/o tasks are

issued in these current partitions (i.e corresponding to the claim's suspending logical partition and inhibit dispatch of tasks mechanism)

and waiting until all pending tasks in the at least one logical partition are complete (Tarui's Fig 1: #101 discloses pending tasks in logical partition are flushed by the I/O adapter circuitry until it completed, when no more pending I/O request and byte counter value is zero, see Tarui's paragraphs 65, 67), and that resumes all suspended logical partitions after the I/O reconfiguration mechanism reconfigures the identified I/O by enable dispatching of tasks to the at least one logical partition (Tarui's paragraph 83 and 84 clearly teaches that after reconfiguration of i/o resources, the partitions are permitted/resumed to use the i/o resources, see Tarui's paragraph 84 lines 11-16), obviously when the partitions are permitted to use the i/o resource, the i/o tasks will be dispatched to the previously stopped logical partitions.

It would have been obvious to one of ordinary skill in the art at the time of invention to include the partition control program and associating logic as suggested by Tarui in Day's system thereby the reconfiguration of i/o resources can be done dynamically and in an automatic manner (Tarui's paragraph 84 lines 12-16).

As in claims 2-3, the claims recite wherein the logical partition suspend/resume mechanism suspends all of the plurality of logical partitions (claim 2); wherein the logical partition suspend/resume mechanism suspends only the logical partitions that own the identified I/O (claim 3). Tarui's paragraph 84 discloses the access partition discriminator that stop/re-start logical partitions whose i/o resources are changed. Thus in a situation when all logic partitions are sharing resources (i.e claim 2) or only a subset of logical partitions are sharing resources (i.e claim 3), the access partition discriminator will stop/re-start the appropriated sharing partitions.

Claim 4 rejected based on the same rationale as in claim 1. Tarui's paragraph 83 discloses the circuitry detects identified I/O required reconfiguration (reconfiguration changes required when hot-plugged i/o resources).

Claims 5,6,10,11,19 rejected based on the same rationale as in claim 1.

Claims 7,14 rejected based on the same rationale as in claim 2.

Claim 8,15 rejected based on the same rationale as in claim 3.

Claims 9,16 rejected based on the same rationale as in claim 4.

### ***Response to Arguments***

Applicant's remarks filed 10/11/06 have been fully considered but they are mooted in view of new ground(s) of rejection necessitated by the Applicant's amendments to the claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 36 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2188

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

When responding to the office action, Applicant is advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

  
HYUNG SOUGH  
SUPERVISORY PATENT EXAMINER

11/30/06